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Aviation functions due to modern safety standards and information technology on the ground and in the air – at least mainly. Pilots who can navigate without onboard computer have an advantage in case of emergency.

Oliver Schuster

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From Cologne to England
heading for the Flying
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England ahead – the White Cliffs of Dover The panorama cockpit allows a spectacular view also for passengers. They may step in one by one and enjoy the nostalgic spirit and the sound of three powerful 900hp engines.

The Dream to fly 1909–2009

100 years ago Blériot has crossed the Channel by his ultra-light aircraft into England for the first time – what a sensation!

Crossing the Channel by Ju 52 for the first time is a similar excitement



Ju 52 landed at Duxford Airfield cheered by the crowd. Photo: Peter s. White, Southgate, London

It is still unclear why the Air France plane crashed on June 1st 2009 on flight AF447 from Rio de Janeiro to Paris. The Airbus 330 carried 228 people onboard. Only 49 bodies and a small amount of wreckage were recovered. The plane and the flight recorder disappeared in the Atlantic without further trace. Two months after the mysterious accident the German magazine DER SPIEGEL published the cover story »The Pilots' Impotence when computers become a risk in the cockpit«.

The leading national newspaper *Süddeutsche Zeitung* stated at the same time that faulty information is misleading the pilot in dangerous situations leading him to lose control of his otherwise still manageable aircraft.

It is not necessary to read the articles on risks of computers in the cockpit;

you already know that a board computer is just a computer, too. Many passengers have experienced their desktop computer crashing. Some may even had computer problems in the car. Therefore they know that even on airplanes a computer crash cannot totally be excluded – the only difference is the deeper nosedive out of the sky. The risk in the

air is much higher when the system receives contradictory information and goes crazy. The Association *Vereinigung Cockpit* opposes automatic flight control. Nowadays the pilot is still in the



The Airbus floating at Hudson River: Passengers are waiting for rescue on the wings. Photo: Brendan McDermid/Reuters

position to overrule the computer, says *Markus Kirschnick* from this organization. It is very important, because there is no pattern for new situations which requires fast action. There was of course, no software for the emergency landing on Hudson river on January 15th 2009. In the extreme likelihood the pilot should be able to fly by the seat of his pants without being hampered by computer.

Obviously Captain *Chesley B. Sullenberger* had the right instinct when wild geese blocked both engines of his Airbus A 320. He was able to do a light swing over the New York City and came gently down on the Hudson river.

Captain *Sullenberger* 58 was an experienced airline pilot, who had served as an US Air Force Pilot. Since he was a student he flew glider planes. His aeronautical capability combined with his decision made at lightning speed saved him and the 155 passengers their lives. Also remember that his maneuver spared the City the wrecking of a refueled plane in its vicinity. The Airbus took off from La Guardia heading to Charlotte, N.C. only minutes before and in a blink the evacuated passengers stood balancing on the wings knee deep in water. The strange

image was published around the globe. Certainly it will never officially be acknowledged that classical flying skills are essential even in computerized jet liners. Nevertheless a number of commercial pilots love to fly small aircrafts conventionally when off duty. When buying an air fare ticket one would prefer to book such a versatile commander for the flight as well. ■

Comfortable Ju 52 Cabin: *The interior was restored carefully with the help of photographs of the Thirties*



Deutsche Lufthansa supports the survival of classical flying skills. The company owns some vintage planes like the Junkers airplane Ju 52/3m. The foundation *Deutsche Lufthansa Berlin Stiftung* allows paying guests to experience the old fashioned way of flying. Many short distance flights and round trips take place at various locations within Germany and adjacent countries.

More than 126,000 passengers went for a sentimental journey back into the thirties since 1986, the year of the second maiden flight of D AQUI. The historical appellation of the Ju 52 was D AQUI when it was put into Lufthansa's service in 1936.

By no means is a long distance flight by Ju 52 a rare event. All 13 seats for the four day trip to England were sold six months before take off at Cologne Bonn

Flight by Ju 52

From Cologne to England heading for the Flying Legends at Duxford



Passengers acting as Ground personnel: *The Ju 52 is pushed back after refueling at Antwerp*



The service engineer checks the engines. The round mirror on the pod helps the pilot to check that the propellers in sync

*) **Fritz Simon** born 21. July 1904 in Wittenberg, Germany – died 6. October 1931, Cobequid Bay, Canada (acc. *Wikipedia*) Simon was Captain at Deutsche Lufthansa, one of 196 Lufthansa-seats, who lost their lives in the early years serving the company. Now the aircraft bears the name BERLIN-TEMPELHOF, mother of all airports opened in 1923 and later home of Lufthansa established in 1926. Reinhardt Abraham's signature reminds us of him as *Vater von Deutsche Lufthansa Berlin-Stiftung*.

International Airport. The aircraft had a stop over in Antwerp Belgium for refueling before heading to Duxford, Cambridgeshire. The Ju 52 landed directly at the aerodrome, built during the First World War and once one of the earliest Royal Air Force stations.

In April 1943 the airfield was handed over to the United States 8th Air Force. Some 200,000 men were stationed at peak strength. Duxford then became Base 357 and the headquarters of the 78th Fighter Group. Duxford was essential to D Day, 6 June 1944, the long awaited beginning of the Allied invasion of occupied Europe. Now the huge airfield houses two large aeronautical museums and various air shows are performed all year round.

The first flying experience

At the first sight the Ju 52 seems fairly tiny. For boarding, a small five step ladder is attached to the entrance. To get in one has to duck considerably. Due to the large windows the cabin feels

is like sitting on a veranda. The interior is decorated predominantly in crocodile beige colors. The arm rest of leather seats were unmovable which required a snake like turn in order to sit down. But the final movement is falling into the chair because the floor is sloped app. 20° inclination to the front because of the small tail wheel.

Another important issue:

no toilet on board. There is a door at the first row, where the flight engineer goes in and out stepping on the wing. But during the flight the door should not be used. It is also not allowed to throw something out of the window not even airsickness bag as passengers are advised in the early days.

Before the aircraft moves its three engines are tested carefully. The engine on the right begins the procedure: 600 hp lead to a maximum of 2250 r/min. At this high speed one cannot see the three blades of the propeller – an advantage when sitting in front and having to take pictures with the propeller in the range of vision.

I become fearful: will the material be strong enough to withstand the brutal forces? My head gets hot, my hands get cold. The ears ring and the stomach turns. Each of the three star engines of Pratt & Whitney has a stroke volume of 22 liter. 400 liter kerosene is consumed per hour. Suddenly the plate under the board timer is in sight **70 Jahre D-AQUI 1936 - 2006** and I am totally relaxed immediately. After so many years Auntie Ju will stand it once more. That is for sure. She knows it for 73 years by now, exactly since April 6th 1936 when she had her maiden flight in Dessau, originally as a seaplane named *Fritz Simon* * with the license code D AQUI. A few days later *Fritz Simon* was part of Lufthansa's pas



The fuel meter shows a comfortable remaining volume. The oil level is still in the green range. Above: Steam from lignite power plant. Right: lignite mining with the black vein of brown coal at the bottom.



senger fleet. After a long, ill fated history the Ju 52 flies again under the Lufthansa emblem, the rising crane, since 1986.

Now the aircraft is ready for take off. It accelerates and is airborne after 500 meters only flying at a speed of 120 km/h. There is no noise from the undercarriage from the landing gear retracting because the Ju is fitted with a rigid device. Soon the plane has reached its cruising altitude of 600 meters. Auntie Ju lays in the air like on eider down. Occasionally someone jumps into bed when turbulences hit the plane. The flight attendant looks after every passenger. But everybody is fine, no one feels sick.

Like in big plane there are airsickness bags provided and the obligatory safety instruction. In the case of emergency the entrance door has to be pressed out on the upper part and will serve as a slide. The second emergency exit is in front at the right side. The door will swing towards the cockpit. One should walk down on the wing along side the cabin where you are advised

to grip the handrail under windows.

Inside the *Kanzel Pulpit*, as the Cockpit was called in early aviation are space for two pilots so called *Flugzeugführer* and *Hilfsflugzeugführer*. They consult old type analog instruments instead of digital displays and turn wooden steering wheels instead of sidesticks. The third man is the flight engineer, formerly called *Bordmechaniker*. He sits between the pilots on a tiny removable seat coated with lambs fur. His body blocks the small entrance to the cockpit while he is in charge turning mighty wheels and traversing large levers with pure man power no hydraulic assistance at the nostalgic flight. Flying by hand is hard work, checking the engine parameters constantly, adjusting, and trimming. The huge wooden trimming wheel has a double function: at first as stabilizer setting and after mechanical reversing it is good for handling of the landing flaps.

Each day the aircraft is maintained and checked before flying. While on the tour to shorter flights and round trips

The Crew on the Ju 52

from 10. to 13. Juli 2009

Pilots
Uwe-Karsten Badow
Herbert Höhn

Flight Engineer
Wolfgang Bendig

Board Technician
Jörg Hennig

Flight Attendant
Ingrid Spieth



English aerial view:
It looks like Toys' fabrication and many matchbox cars

the service team follows by car. For the flight to England the service engineer came with us. The passengers may assist by supervising some instruments. On the engine pod: an indicator for fuel consumption can be observed through the window. Underneath five connected tanks, each of them holding 900 liters, are placed. The lubricant consumption is indicated by a red ball in the oil cup. During cruising at an altitude of 600 meters 1800 ft at Autobahn speed 180 km/h = 112 miles/h = 100 knots it is interesting to tracking the usage.

The admiration for flying is underlain with great respect for the technology in early aviation plus the desire of Lufthansa's management to safeguard the man made *creation*. It is unbelievable how hard they tried for 15 months to rejuvenate Antie Ju at the Lufthansa base at Hamburg. Finally the old *new* aircraft was fit again for her second maiden flight in April 1986. Ever since, the aircraft is taken apart for a complete overhaul during wintertime. Of course no spare parts can be ordered from the works in Dessau. It needs traditional skills and know how from a bygone time for the replacements.

Even if it looks unimportant after so much praise, the flight had a great final destination as well. The air show FLYING LEGENDS in Duxford was spectacular. Warbirds from World War I and II were watched enthusiastically by more than 2000,000 spectators.

The old City of Cambridge was a superb balance to life on the airfield: Old colleges and churches, exotic restaurants and in addition impressive bookshops. But the 8 kg limit for the luggage was a natural hindrance. Honestly the joyful expectation of the return flight made it easy to renounce. ■

Impressum



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